

CLAIMS

What is claimed is:

1. A system for acquiring shape information from three-dimensional shape data using a computer system, said three-dimensional shape data including at least one shape
5 element, comprising :
 - a three-dimensional shape data acquisition unit for acquiring the three-dimensional shape data stored in a data storage unit;
 - a three-dimensional shape information generation unit for generating, on said shape element basis, various types of shape information related to each shape element;
 - 10 a linkage identifier setup unit for adding linkage identifiers to link, for each element, among said various types of shape information, when generating the shape information;
 - a shape information storing unit for storing said shape information having said linkage identifiers in the data storage unit; and
 - 15 a shape information linkage control unit for, while referring to said linkage identifiers, linking and processing among said various types of shape information related to a particular shape element.
2. The system of Claim 1, wherein
20 said three-dimensional shape information generation unit successively acquires, based on the physical and logical organizations of said three-dimensional shape data, each type of shape information related to said shape elements making up such physical and logical organizations.
- 25 3. The system of Claim 1, wherein
said three-dimensional shape information generation unit acquires, on said shape element basis, information regarding the shape element's name, attributes, two-dimensional vector data, and image data as said shape information.

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4. The system of Claim 1, wherein

said linkage identifier setup unit generates linkage identifiers based on information concerning said shape elements included in said three-dimensional shape data.

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5. The system of Claim 1, wherein

said shape information linkage control unit comprises a plurality of information processing modules for displaying said shape information, and a linkage control module connected to said plurality of information processing modules, wherein upon the indication of a specific shape element related to the shape information displayed by said information processing modules, the linkage identifier corresponding to that shape element is sent to said linkage control module, and in turn, said linkage control module sends said identifier to each information processing module so that each information processing module changes, by a specified method, its display for the shape elements that correspond to said identifier.

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6. A system for acquiring shape information from three-dimensional shape data using a computer system, said three-dimensional shape data including at least one shape element, and linking and processing among the various types of shape information related to said shape elements; comprising:

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a three-dimensional shape data acquisition unit for acquiring the three-dimensional shape data stored in a data storage unit;

a three-dimensional shape information generation unit for generating, on said shape element basis, various types of shape information related to said shape elements;

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a linkage identifier setup unit for adding linkage identifiers to link, for each element, among said various types of shape information, when generating the shape information; and

a shape information storing unit for storing said shape information having said linkage identifiers in the data storage unit.

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7. A computer software program for acquiring shape information from three-dimensional shape data using a computer system, said three-dimensional shape data including at least one shape element, comprising:

5 a three-dimensional shape data acquisition command unit, stored in a computer readable storage medium, for acquiring three-dimensional shape data stored in a data storage unit;

a three-dimensional shape information generation command unit, stored in said computer-readable storage medium, for generating on said shape element basis, various
10 types of shape information related to said shape elements;

a linkage identifier setup command unit, stored in said computer-readable storage medium, for adding linkage identifiers to link, for each shape element, among said various types of shape information for that element, when generating the shape information;

15 a shape information storing command unit, stored in said computer-readable storage medium, for storing said shape information having said linkage identifiers in the data storage unit; and

a shape information linkage control command unit, stored in said computer-readable storage medium, for linking and processing among said various types of shape
20 information related to the particular shape elements, while referring to said linkage identifiers.